



Troubleshooting Guide

Compaq D315

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This guide provides helpful hints and solutions for troubleshooting the above product as well as scenarios for possible hardware and software problems.

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Computer Diagnostic Features

Compaq Diagnostics for Windows

The Compaq Diagnostics for Windows (DFW) utility is a component of Intelligent Manageability that allows you to view information about the hardware and software configuration of your computer while running Microsoft Windows 2000 and Microsoft Windows XP. It also allows you to perform hardware and software tests on the subsystems of your computer.

When you invoke Diagnostics for Windows, the Overview screen is displayed, which shows the current configuration of the computer. From the Overview screen, there is access to several categories of information about the computer and the **Test** tab. The information in every screen of the utility can be saved to a file or printed.



To test all subsystems, you must log in as the administrator. If you do not log in as the administrator, you will be unable to test some subsystems. The inability to test a subsystem will be indicated by an error message under the subsystem name in the TEST window or by shaded check boxes that cannot be selected.

Menu Bar—File, Categories, Navigation, Level, Tab, Help

At the top of the Compaq Diagnostics for Windows screen is the Menu Bar consisting of six pull-down menus:

- File—Save As, Print, Printer Setup, Exit
- Categories—See the list of categories in the following section
- Navigation—Previous Category (**F5**), Next Category (**F6**)
- Level—Less (**F7**), More (**F8**) <information on the screen>
- Tab—Overview, Test, Status, Log, Error
- Help—Contents, How to use Help, About

ToolBar—Icons for Different Categories of Information

Below the Menu Bar is a row of icons for each of the following categories of information about the computer:

- System—System board, ROM, date, and time information
- Asset Control—Asset tag, system serial number, and processor information
- Input Devices—Keyboard, mouse, and joystick(s) information
- Communication—Ports in system and information about each
- Storage—Storage drives in system and information about each
- Graphics—Graphics system information
- Memory—System board and Windows memory information
- Multimedia—Optical storage (CD, DVD, and so on) and audio information
- Windows—Windows information
- Architecture—PCI Device information
- Resources—IRQ, I/O, and Memory Map information
- Health—Status of system temperature and hard drives
- Miscellaneous—CMOS, DMI, BIOS, System, Product Name, and Serial Number

Tabs—Overview, Test, Status, Log, Error

Below the ToolBar are five tabs:

- Overview—The Overview window displays general overview information about the computer. This is the window that is displayed when you first start the utility. The left side of the window shows hardware information, and the right side of the window shows software information.
- Test—The Test window allows you to choose various parts of the system to test. You can also choose the type of test and testing mode.
- Status—The Status window displays the status of each test in progress. You can cancel testing by clicking the **Cancel Testing** button.
- Log—The Log window displays a log of tests for each device.
- Error—The Error window displays any errors that occurred during device testing. The window lists the device being tested, the type and number of errors, and the error code.

Installing Compaq Diagnostics for Windows

This operation is required only if the diagnostics program software has been loaded on the hard drive but not installed.

1. Close any Windows applications.
2. Double-click the **Compaq Diagnostics for Windows** icon, located on the Windows Desktop.

3. Click **Next** to install Compaq Diagnostics for Windows.
4. After the program has finished installing, you may be prompted to restart the computer, or it may automatically restart. If prompted, click **Finish** to restart the computer or **Cancel** to exit the program. You must restart the computer to complete the installation of Compaq Diagnostics for Windows.



If you want to upgrade an existing version of Compaq Diagnostics for Windows installed on your computer, visit www.compaq.com/support/files and click on the applicable product. In the next window, find **Option 2—Locate by Category**. Select **Management Applications and Utilities**. Click **Locate Software** and download the latest version. Execute the downloaded file and select **Repair** to update the installed version. This will cause the new version to overwrite the old version.

Using Categories in Compaq Diagnostics for Windows

To use the categories do the following:

1. Click **Start > Compaq Information Center > Compaq Diagnostics for Windows**. You can also select the **Compaq Diagnostics for Windows** icon, located in the Control Panel.

The screen displays the overview of the computer hardware and software.

2. For specific hardware and software information, select a category from the **Categories** pull-down menu or the appropriate icon on the toolbar.



As you move your cursor over the toolbar icons, the corresponding category name displays near the cursor.

3. To display more detailed information in a selected category, click **More** in the **Information Level** box in the lower left corner of the window or click **Level** at the top of the screen and select **More**.
4. Review, print, and/or save this information as needed.



To print the information, click **File**, then select **Print**. Select one of the following options: **Detailed Report (All Categories)**, **Summary Report (All Categories)**, or **Current Category**. Click **OK** to print the report you selected.



To save the information, click **File**, then select **Save As**. Select one of the following options: **Detailed Report (All Categories)**, **Summary Report (All Categories)**, or **Current Category**. Click **OK** to save the report you selected.

5. To exit Compaq Diagnostics for Windows, click **File**, and then click **Exit**.

Running Diagnostic Tests in Compaq Diagnostics for Windows

To run diagnostic tests:

1. Click **Start > Compaq Information Center > Compaq Diagnostics for Windows**. You can also select the **Compaq Diagnostics for Windows** icon, located in the Control Panel.

The screen displays the overview of the computer hardware and software. Five tabs are displayed below the row of icons:

Overview, Test, Status, Log, and Error.

2. Click the **Test** tab, or click **Tab** at the top of the screen and select **Test**.

3. Select one of the following options:

- ☐ **Quick Test**—Runs a quick, general test on each device. Requires no user intervention if Unattended Mode is selected.
- ☐ **Complete Test**—Runs maximum testing of each device. The user can select Interactive Mode or Unattended Mode.
- ☐ **Custom Test**—Runs only the tests you select. To select specific devices or tests, find the device in the list, then select the check box beside each test. When selected, a red check mark is displayed in the box. Some tests selected may require user intervention.



To test all subsystems, you must log in as the administrator. If you do not log in as the administrator, you will be unable to test some subsystems. The inability to test a subsystem will be indicated by an error message under the subsystem name in the Test window or by shaded boxes that cannot be checked.

4. Select **Interactive Mode** or **Unattended Mode**. In Interactive Mode, the diagnostic software will prompt you for input during tests that require it. Some tests require interaction and will display errors or halt testing if selected in conjunction with Unattended Mode.
5. Click the **Begin Testing** button at bottom of window. Test Status is displayed, showing the progress and result of each test. For more details on the tests run, click the **Log** tab or click **Tab** at the top of the screen and select **Log**.
6. If errors are found, click the **Error** tab to display more detailed information and recommended actions. By following the recommended actions, you may be able to solve some problems yourself.
7. Click **Print** or save the error information in case you need to contact your Compaq authorized dealer, reseller, or service provider for assistance.
8. To exit Compaq Diagnostics for Windows, click **File**, then click **Exit**.

Compaq Configuration Record Utility

Compaq Configuration Record Utility is a windows-based information-gathering tool similar to other Compaq management tools. It gathers critical hardware and software information from various computer subsystems to give a complete view of your desktop. Configuration Record Utility provides a means for automatically identifying and comparing configuration changes, and has the ability to maintain a configuration history. The information can be saved as a history of multiple sessions.

This utility was developed to allow resolution of problems without taking the desktop offline and to assist in maximizing the desktop's availability. The information obtained by the utility is useful in troubleshooting system problems, and streamlines the service process by enabling quick and easy identification of system configurations, which is the first step in resolving service cases.

The Compaq Configuration Record Utility gathers information automatically on the hardware and operating system software to deliver a comprehensive view of the system. It gathers information on such items as the ROM, asset tag, processor, physical drives, PCI devices, memory, graphics, operating system version number, operating system parameters, and the operating system startup files and displays it. If the original *Base.log* file is present in the *cpqdiags* directory, the *Base.log* file is displayed next to the *Now.log* file in a split window with the differences between the two highlighted in the color red.

To run this program:

1. Click **Start > Compaq Information Center > Compaq Configuration Record**. You can also select the **Compaq Configuration Record** icon, located in the Control Panel.



The Compaq Configuration Record Utility has two view options: **Show Changed Items Only** and **Show All**. The default view is **Show Changed Items Only**, therefore all the text is displayed in the color red since it shows only the differences. Switching to **Show All** displays the complete, comprehensive view of the system.



The Compaq Configuration Record Utility is part of Compaq Diagnostics for Windows. Whenever you upgrade Compaq Diagnostics for Windows, the Compaq Configuration Record Utility is also upgraded.

2. The default view is **Show Changed Items Only**. To view all the information gathered by Compaq Configuration Record, click **View** at the top of the window and select **Show All**, or click the **Show All Items** icon.
3. To save the information in the left or right window, select **File > Save Window File** and then select **Left Window File** or **Right Window File**.



Saving the configuration of the computer periodically allows the user to keep a history of the configuration. This history may be useful to your service provider if the system ever encounters a problem that needs debugging.

4. To exit Compaq Configuration Record, click **File**, then click **Exit**.

Compaq Remote Diagnostics Enabling Agent

This utility was developed to allow faster resolution of problems without having to visit a site and take the computer offline and to assist in maximizing computer availability. The information obtained by the utility is useful in troubleshooting computer problems, and streamlines the service process by enabling quick and easy identification of computer problems.



The Compaq Remote Diagnostics Enabling Agent only works if Diagnostics for Windows is also installed.

The Compaq Remote Diagnostics Enabling Agent provides a Web browser interface to Compaq Diagnostics for Windows. This enables remote control of the diagnostics and facilitates easy transfer of computer information from remote machines to a service provider.

The Compaq Remote Diagnostics Enabling Agent captures hardware configuration and provides the ability to perform tests remotely to diagnose computer problems. In addition, the Compaq Remote Diagnostics Enabling Agent identifies any computer hardware device problems signaled by the Compaq DMI management agents. These hardware devices are automatically selected for testing by the Compaq Remote Diagnostics Enabling Agent.

Use of Compaq Remote Diagnostics Enabling Agent reduces the time and effort needed to perform hardware diagnostic tasks. By allowing the service personnel direct access to computer hardware diagnostic tools, the Compaq Remote Diagnostics Enabling Agent delivers a view of the computer hardware devices and the tests available to isolate hardware problems with the ease and simplicity of a single tool. This approach minimizes problem resolution time, and also minimizes administration resources because less time is spent visiting a site or communicating with a user over the phone to resolve computer hardware problems when they do occur.



The Compaq Remote Diagnostics Enabling Agent was designed to work in the Compaq Insight Manager LC environment. It is pre-loaded on most commercial desktops and is available through a SoftPak at www.compaq.com under **Management Applications and Utilities**. For more information about Compaq Insight Manager LC, see the *Desktop Management Guide*.

To start this utility:

1. Select the **Compaq Remote Diagnostics** icon located in the Control Panel.



The Compaq Remote Diagnostics Enabling Agent allows you to run Diagnostic Test or the Configuration Record Utility in a browser window. Both of these utilities can be run remotely or locally.

2. To exit Compaq Remote Diagnostics, click **File** and then click **Close**.

Protecting Your Software

To protect software from loss or damage, you should keep a backup copy of all system software, applications, and related files stored on the hard drive. See the operating system or backup utility documentation for instructions on making backup copies of data files.

Restoring Your Software

The operating system and software can be restored to its original state as when you purchased the computer by using your Compaq Restore Kit. See your Compaq Restore Kit for complete instructions on using this feature.

Troubleshooting Without Diagnostics

This guide provides information on how to identify and correct minor disk, graphics, memory, and software problems. It also explains many of the messages that may be displayed on the screen, including specific error messages that may appear during the Power-On Self-Test (POST) at startup.

POST Message Disabled suppresses most system messages during POST, such as memory count and non-error text messages. In this mode, the Compaq logo and Web address appear on the computer monitor. If a POST error occurs, the screen will display the error message. To manually switch to the POST Messages Enabled mode during POST, press any key (except **F10** or **F12**). The default mode is POST Message Disabled.

The speed at which the computer loads the operating system and the extent to which it is tested are determined by the POST mode selection.

Quick Boot is a fast startup process that does not run all of the system level tests, such as the memory test. Full Boot runs all of the ROM-based system tests and takes longer to complete.

Full Boot may also be enabled to run every 1 to 30 days on a regularly scheduled basis. To establish the schedule, reconfigure your computer to the Full Boot Every x Days mode, using Computer Setup.



For more information on Computer Setup, see the *Computer Setup (F10) Utility Guide*.

Helpful Hints

If you encounter some minor problems with your computer, monitor, or software, see the following list of general suggestions before taking further action:

- Check that the computer and monitor are plugged into a working electrical outlet.
- Check to see that the computer is turned on and the green power light is on.
- Check to see that the monitor is turned on and the green monitor light is on.
- Turn up the brightness and contrast controls of the monitor if the monitor is dim.
- Press and hold any key. If the system beeps, then your keyboard should be operating correctly.
- Check all cable connections for loose connections or incorrect connections.
- Reconfigure your computer after installing a non–plug and play expansion board or other option. See “Solving Hardware Installation Problems” for instructions.
- Be sure that all the needed device drivers have been installed. For example, if you are using a printer, you need a driver for that model printer.
- Remove all diskettes from your system before turning it on.
- If you have installed an operating system other than the factory-installed operating system, check to be sure that it is supported on your system.
- If your system has an AGP card installed (on select models only), the monitor must be plugged into the monitor connector on the AGP card. The other monitor connector is disabled and if the monitor is connected into this port, the monitor will not function.




CAUTION: When the computer is plugged into an AC power source, there is always voltage applied to the system board. You must disconnect the power cord from the power source before opening the computer to prevent system board or component damage.

Solving General Problems

You may be able to easily resolve the general problems described in this section. If a problem persists and you are unable to resolve it yourself or if you feel uncomfortable about performing the operation, contact your Compaq authorized dealer or reseller.

Solving General Problems

Problem	Cause	Solution
Computer will not turn on.	Computer is not connected to an external power source.	Connect to an external power source.
	Cables to the external power source are unplugged.	Ensure that cables connecting the computer to the external power source are plugged in properly and the wall outlet is active.
	A defective PCI card has been installed.	Remove any expansion board that was just installed.
	Drive power, data, or power supply cables may not be properly connected.	Reseat drive power, data, and power supply cables.
	Power line selector switch on rear of computer chassis not switched to correct line voltage (115V or 230V) (some models).	Select the proper AC voltage using the slide switch.
Computer will not respond to keyboard or mouse.	Computer is in Stand By mode.	Press the power button to resume from Stand By mode.
 CAUTION: When attempting to resume from Stand By mode, do not hold down the power button for more than four seconds. Otherwise, Stand By mode is lost, and you will lose your data.		

Solving General Problems (*Continued*)

Problem	Cause	Solution
Computer date and time display is incorrect.	RTC (real-time clock) battery may need to be replaced. Battery life is approximately 3–5 years.	First, reset the date and time under Control Panel (Computer Setup can also be used to update the RTC date and time). If the problem persists, replace the RTC battery. See the <i>Hardware Reference Guide</i> for instructions on installing a new battery, or contact your Compaq authorized dealer or reseller for RTC battery replacement.
<p>Computer powered off automatically and the Power LED is:</p> <ol style="list-style-type: none"> 1. Flashing Red or Yellow four times per second, OR 2. Flashing Red or Yellow two times one second apart, followed by a two second pause, OR 3. Not flashing. 	<p>The unit temperature was exceeded. A fan may be blocked or not turning. OR the heatsink is not properly attached to the processor.</p>	<ol style="list-style-type: none"> 1. Unit is in an exceedingly hot environment. Let it cool down. 2. Ensure computer air vents are not blocked and internal fans are running (such as the power supply fan, chassis fan, and/or the processor fan). 3. Ensure heatsink is properly seated. 4. Contact Compaq authorized reseller or service provider.
	The unit temperature was exceeded because the computer was functioning with the cover or access panel removed.	Replace cover or access panel, and let the computer cool down before attempting to turn on power to the computer.
	Processor or system fan has failed.	Contact a Compaq authorized service provider to replace the processor or system fan.
Computer appears to pause periodically.	Network driver is loaded and no network connection is established.	Establish a network connection, or use Computer Setup or Microsoft Windows Device Manager to disable the network controller.

Solving General Problems (*Continued*)

Problem	Cause	Solution
Poor performance is experienced.	Processor is hot.	<ol style="list-style-type: none"> 1. Make sure the airflow to the computer is not blocked. 2. Make sure the fans are connected and working properly (some fans only operate when needed). 3. Make sure the processor heatsink is installed properly.
Cursor will not move using the arrow keys on the keypad.	The Num Lock key may be on.	Press the Num Lock key. The Num Lock light should not be on if you want to use the arrow keys.

Solving Power Supply Problems

Solving Power Supply Problems

Problem	Cause	Solution
Computer will not turn on (Power LED on front of computer not on).	Computer is not connected to an external power source.	Connect to an external power source.
	Cables to the external power source are unplugged.	Ensure that cables connecting the computer to the external power source are plugged in properly and the wall outlet is active.
	Power switch not connected to the system board (supported on select models only).	Plug the power switch cable into the system board.
	Power line selector switch on rear of computer chassis not switched to correct line voltage (115V or 230V) (some models).	Select the proper AC voltage using the slide switch.
	Wall outlet is defective.	Test the outlet by connecting a different electrical device to the outlet.
Power LED flashes Red or Yellow every 2 seconds on most models.	Power supply overloaded or short was detected.	Unplug computer from AC power. Unplug internal power cables from all devices and unplug all PCI cards. Reconnect devices one at a time and turn power on to identify the cause.
	Diskette drive power cable not properly connected.	When installing power cable to diskette drive, ensure that all 4 pins on the drive are connected to the power cable connector.

Solving Power Supply Problems (*Continued*)

Problem	Cause	Solution
Power LED flashes Red or Yellow every 2 seconds on most models (<i>continued</i>).	Power supply shuts down after system warms up. Thermal overload caused by bad fan.	Replace power supply.
	Power supply will not turn on because of internal power supply fault.	Replace power supply.
Power supply shuts down intermittently.	Power line selector switch on rear of computer chassis not switched to correct line voltage (115V or 230V) (some models).	Select the proper AC voltage using the slide switch.
	Power supply will not turn on because of internal power supply fault.	Replace power supply.
Computer powered off automatically and the Power LED is: <ol style="list-style-type: none"> 1. Flashing Red or Yellow four times per second, OR 2. Flashing Red two times one second apart, followed by a two second pause, OR 3. Not flashing. 	The unit temperature was exceeded. A fan may be blocked or not turning, OR the heatsink is not properly attached to the processor.	<ol style="list-style-type: none"> 1. Unit is in an exceedingly hot environment. Let it cool down. 2. Ensure computer air vents are not blocked and internal fans are running (such as, the power supply fan, chassis fan, and/or the processor fan). 3. Ensure heatsink is properly seated. 4. Contact Compaq authorized reseller or service provider.

Solving Diskette Problems

Common causes and solutions for diskette problems are listed in the following table.



You may need to reconfigure the computer when you add or remove hardware, such as an additional diskette drive. See “Solving Hardware Installation Problems” for instructions.

Solving Diskette Problems

Problem	Cause	Solution
Diskette drive light stays on.	Diskette is damaged.	Right-click Start , click Explore , and select a drive. Select File > Properties > Tools . Under Error-checking , click Check Now .
	Diskette is incorrectly inserted.	Remove diskette and reinsert.
	Drive button is not pushed in.	Push in drive button.
	Files on diskette are damaged.	Check the program diskettes.
	Drive cable is not properly connected.	Reconnect drive cable.
Drive not found.	Cable is loose.	Reseat diskette drive data and power cable.
	Removable drive is not seated properly.	Reseat the drive.
Diskette drive cannot write to a diskette.	Diskette is not formatted.	Format the diskette.
	Diskette is write-protected.	Use another diskette or remove the write protection.
	Writing to the wrong drive.	Check the drive letter in your path statement.
	Not enough space is left on the diskette.	Use another diskette.

Solving Diskette Problems (*Continued*)

Problem	Cause	Solution
Diskette drive cannot write to a diskette (<i>continued</i>).	Diskette write control is enabled.	Use Computer Setup to check your storage security feature disabled settings.
	Diskette is damaged.	Replace the damaged disk.
Cannot format diskette.	Invalid media reported.	When formatting a disk in DOS, you may need to specify diskette capacity. For example, to format a 1.44-MB diskette, type the following command at the DOS prompt: FORMAT A: /F:1440
A problem has occurred with a disk transaction.	The directory structure is bad, or there is a problem with a file.	Right-click Start , click Explore , and select a drive. Select File > Properties > Tools. Under Error-checking , click Check Now .
Diskette drive cannot read a diskette.	Diskette is not formatted.	Format the diskette. 1. From Windows Explorer select the disk (A) drive. 2. Right-click the drive letter and select Format . 3. Select the desired options, and click Start to begin formatting the diskette.
	You are using the wrong diskette type for the drive type.	Check the type of drive that you are using and use the correct diskette type.
	You are reading the wrong drive.	Check the drive letter in the path statement.
	Diskette is damaged.	Replace the diskette with a new one.

Solving Diskette Problems (*Continued*)

Problem	Cause	Solution
"Invalid system disk" message is displayed.	A diskette that does not contain the system files needed to start your computer has been inserted in the drive.	When drive activity stops, remove the diskette and press the Spacebar . The computer should start up.
	Diskette error has occurred.	Restart your computer by pressing the power button.
Nonsystem disk/NTLDR missing message.	The system is trying to start from a nonbootable diskette.	Remove the diskette from the drive.
Cannot Boot to Diskette.	Diskette is not bootable.	Replace with a bootable diskette.
	Diskette boot has been disabled in Computer Setup.	Run Computer Setup and enable diskette boot in Storage > Boot Order .
	Removable media boot has been disabled in Computer Setup.	Run Computer Setup and enable Removable Media Boot in Storage > Storage Options .
	Diskette MBR validation is enabled.	Run Computer Setup and disable Diskette MBR Validation in Storage > Storage Options .

Solving Hard Drive Problems

Solving Hard Drive Problems

Problem	Cause	Solution
Hard drive error occurs.	Hard disk has bad sectors or has failed.	Use a utility to locate and block usage of bad sectors. If necessary, reformat the hard disk.
Disk transaction problem.	Either the directory structure is bad or there is a problem with a file.	Right-click Start , click Explore , and select a drive. Select File > Properties > Tools . Under Error-checking , click Check Now .
Drive not found (identified).	Cable could be loose.	Check cable connections.
	The system may not have automatically recognized a newly installed device.	See reconfiguration directions in the "Hardware Installation Problems" section. If system still does not recognize the new device, check to see if the device is listed within Computer Setup. If it is listed, the probable cause is a driver problem. If it is not listed, the probable cause is a hardware problem. If this is a newly installed drive, enter Setup and try adding a POST delay under Advanced > Power-On .
	Drive jumper settings may be incorrect.	If the drive is a secondary drive that has just been installed on the same cable as the primary drive, verify that the jumpers for both drives are set correctly.
	Drive's IDE controller is disabled in Computer Setup.	Run Computer Setup and enable the Primary and Secondary IDE controllers in Storage > Storage Options .

Solving Hard Drive Problems (*Continued*)

Problem	Cause	Solution
Drive not found (identified) (<i>continued</i>).	Drive responds slowly immediately after power-up.	Run Computer Setup and increase the POST Delay in Advanced > Power-On Options .
Nonsystem disk/NTLDR missing message.	The system is trying to start from a diskette that is not bootable.	Remove the diskette from the diskette drive.
	The system is trying to start from the hard drive but the hard drive may have been damaged.	Insert a bootable diskette into the diskette drive and restart the computer. If the hard drive is still inaccessible after booting to a diskette and MBR Security is enabled, you may try restoring the previously saved MBR image. To do so, enter Setup and select Security > Restore Master Boot Record .
	System files missing or not properly installed.	Insert a bootable system diskette and restart. Verify hard drive is partitioned and formatted. Install system files for the appropriate operating system if necessary.
	Hard drive boot has been disabled in Computer Setup.	Run Computer Setup and enable the hard drive entry in the Storage > Boot Order list.
Second Ultra ATA hard drive does not perform optimally.	You are using the wrong cable for the drive type.	Reinstall the second Ultra ATA hard drive using an 80-conductor cable. The 80-conductor cable is standard on select models.
	Both slow and fast UATA devices are on the same data cable.	Change slow UATA devices to a separate data cable connected to the secondary IDE controller on the system board.

Solving Hard Drive Problems (*Continued*)

Problem	Cause	Solution
Computer will not start.	Hard drive is damaged.	Observe the beeps and LED lights on the keyboard. See Appendix A, "POST Error Messages" to determine possible causes. See your Worldwide Limited Warranty for details.
Computer seems to be locked up.	Program in use has stopped responding to commands.	Attempt the normal Windows "Turn off Computer" procedure. If this fails, press the power button for four or more seconds to turn off the power. To restart your computer, press the power button again.

Solving Display Problems

If you encounter display problems, see the documentation that came with your monitor and to the common causes and solutions listed in the following table.

Solving Display Problems

Problem	Cause	Solution
Blank screen.	Monitor is not turned on and the monitor light is not on.	Turn on the monitor and check that the monitor light is on.
	The cable connections are not correct.	Check the cable connection from the monitor to the computer and to the electrical outlet.
	The energy saver feature has been enabled.	Press any key or click the mouse button and, if set, type your password.
	The RGB (Red, Green, Blue) input switch on the monitor is incorrectly set.	Set the monitor's RGB input switch to 75 ohms and, if there is a sync switch, set it to external.
	System ROM is bad; system is running in Failsafe Boot Block mode (indicated by one long beep and three short beeps).	Reflash the ROM using a ROMPaq diskette. See the "Failsafe Boot Block ROM" section of the <i>Desktop Management Guide</i> for more information.
	You are using a fixed-sync monitor and it will not sync at the resolution chosen.	Be sure that the monitor can accept the same sweep rate as the resolution chosen.
	Computer is in Stand By mode.	Press the power button to resume from Stand By mode.



CAUTION: When attempting to resume from **Stand By** mode, do not hold down the power button for more than four seconds. Otherwise, **Stand By** mode is lost, and you will lose your data.

Solving Display Problems (*Continued*)

Problem	Cause	Solution
Blank screen (<i>continued</i>).	Monitor cable is plugged into the wrong connector.	If the computer system has both an integrated graphics connector and an AGP card connector, plug the monitor cable into the AGP card connector in the expansion card area on the back of the computer.
	The VGA/BNC selector switch is not properly set.	Set the selector switch to agree with the cable connection.
Monitor does not function properly when used with energy saver features.	Monitor without energy saver capabilities is being used with energy saver features enabled.	Disable monitor energy saver feature.
Graphics colors are wrong.	The cabling or monitor impedance is incorrect.	<ol style="list-style-type: none"> 1. If you are using BNC cables, be sure that the Red, Green, and Blue BNC cables are connected to the corresponding monitor connectors. 2. Be sure your monitor's RGB inputs are set to 75 ohms.
Dim characters.	The brightness and contrast controls are not set properly.	Adjust the monitor brightness and contrast controls.
	Cables are not properly connected.	Check that the graphics cable is securely connected to the graphics card and the monitor.
	The RGB switch on the back of the monitor is incorrectly set.	Set the RGB switch (and sync options, if this option is available) to 75 ohms, with the sync set to external. See the documentation included with the monitor.

Solving Display Problems (*Continued*)

Problem	Cause	Solution
Blurry video or requested resolution cannot be set.	If the graphics controller was upgraded, the correct graphics drivers may not be loaded.	Install the video drivers on the diskette included in the upgrade kit.
	Monitor is not capable of displaying requested resolution.	Change requested resolution.
Screen goes blank.	You may have a screen blanking utility installed or energy saver features are enabled.	Press any key or type password.
The picture is broken up, or it rolls, jitters, or flashes.	The monitor connections may be incomplete or the monitor may be incorrectly adjusted.	<ol style="list-style-type: none"> 1. Be sure the monitor cable is securely connected to the computer. 2. In a 2-monitor system or if another monitor is in close proximity, be sure the monitors are not interfering with each other's electromagnetic field by moving them apart. 3. Fluorescent lights or fans may be too close to the monitor.
Monitor overheats.	There is not enough ventilation space for proper airflow.	Leave at least 3 inches (7.6 cm) of ventilation space. Be sure there is nothing sitting on top of the monitor obstructing the air flow.

Solving Audio Problems


If your computer has audio features and you encounter audio problems, see the common causes and solutions listed in the following table.

Solving Audio Problems

Problem	Cause	Solution
Sound does not come out of the speaker or headphones.	Software volume control is turned down.	Double-click the Speaker icon on the taskbar, then set volume by adjusting the volume slider.
	CD-ROM or DVD volume control on the front of the computer is turned down.	Turn the volume control knob on front of computer to increase the volume.
	The external speakers are not turned on.	Turn on the external speakers.
	External speakers plugged into the wrong audio jack.	See the sound card documentation for proper speaker connection.
	Audio cable not connected.	Connect audio cable between CD or DVD-ROM drive and the system board.
	Headphones or devices connected to the line-out connector mute the internal speaker.	Turn on and use headphones or external speakers, if connected, or disconnect headphones or external speakers.
	Volume is muted.	<ol style="list-style-type: none"> 1. From the Control Panel program, click Sound, Speech and Audio Devices, then click Sounds and Audio Devices. 2. Click the Mute check box to remove the check mark from the box.

Solving Audio Problems (*Continued*)

Problem	Cause	Solution
Sound does not come out of the speaker or headphones (<i>continued</i>).	Computer is in Stand By mode.	Press the power button to resume from Stand By mode.
Noise or no sound comes out of the speakers or headphones.	Computer may not be detecting the correct speaker/headphone type or output or analog-to-digital auto-sense is not engaged.	<ol style="list-style-type: none"> 1. If you are using digital speakers that have a stereo jack and want the system to auto-switch to digital, use a stereo-to-mono adapter to properly engage the auto-sense feature. 2. If a stereo-to-mono adapter is not available, use the multimedia device properties to manually switch the audio signal from analog to digital. 3. If the headphones have a mono jack, use the multimedia device properties to switch the system to analog out. <p>For information on how to change the Audio Output Mode, see Appendix D, “Setting Up Analog/Digital Audio Output.”</p>

 If you set digital as your **Output Mode**, the internal speaker and external analog speakers will no longer output audio until you switch back to an auto-sense or analog mode.

If you set analog as your **Output Mode**, external digital speakers will not function until change the output mode back into an auto-sense or digital mode.

See Appendix D, “Setting Up Analog/Digital Audio Output” for additional information.

Solving Printer Problems

If you encounter printer problems, see the documentation that came with your printer and to the common causes and solutions listed in the following table.


Solving Printer Problems

Problem	Cause	Solution
Printer will not print.	Printer is not turned on and online.	Turn the printer on and make sure it is online.
	The correct printer drivers for your application are not installed.	<ol style="list-style-type: none"> 1. Install the correct printer driver for your application. 2. Try printing using the DOS command: DIR C:\ > [printer port] where [printer port] is the address of the printer being used. If printer works, reload printer driver.
	If you are on a network, you may not have made the connection to the printer.	Make the proper network connections to the printer.
	Printer may have failed.	Run printer self-test.
Printer will not turn on.	The cables may not be connected properly.	Reconnect all cables and check the power cord and electrical outlet.
Printer prints garbled information.	The correct printer driver for your application is not installed.	Install the correct printer driver for your application.
	The cables may not be connected properly.	Reconnect all cables.
	Printer memory may be overloaded.	Reset the printer by turning it off for one minute, then turn it back on.
Printer is offline.	The printer may be out of paper.	Check the paper tray and refill it if it is empty. Select online.


Solving Keyboard and Mouse Problems

If you encounter keyboard or mouse problems, see the documentation that came with your equipment and to the common causes and solutions listed in the following table.

Solving Keyboard Problems

Problem	Cause	Solution
Keyboard commands and typing are not recognized by the computer.	Keyboard connector is not properly connected.	<ol style="list-style-type: none"> 1. On the Windows desktop, click Start. 2. Click Shut Down or Turn Off Computer. The Turn Off Computer dialog box is displayed. 3. Select Shut Down or Turn Off. 4. After the shutdown is complete, reconnect the keyboard to the back of your computer and restart the computer.
	Program in use has stopped responding to commands.	Shut down your computer using the mouse and then restart the computer.
	Keyboard needs repairs.	See your Worldwide Limited Warranty for details.
	Computer is in Stand By mode.	Press the power button to resume from Stand By mode.
 CAUTION: When attempting to resume from Stand By mode, do not hold down the power button for more than four seconds. Otherwise, Stand By mode is lost, and you will lose your data.		
Cursor will not move using the arrow keys on the keypad.	The Num Lock key may be on.	Press the Num Lock key. The Num Lock light should not be on if you want to use the arrow keys.

Solving Mouse Problems

Problem	Cause	Solution
Mouse does not respond to movement or is too slow.	Mouse connector is not properly plugged into the back of the computer.	<p>Shut down your computer using the keyboard.</p> <ol style="list-style-type: none"> 1. Press the Ctrl and Esc keys at the same time (or press the Windows logo key) to display the Start menu. 2. Use the up or down arrow key to select Shut Down or Turn Off Computer and then press the Enter key. 3. Use the up or down arrow key to select the Shut Down or Turn Off option and then press the Enter key. 4. After the shutdown is complete, plug the mouse connector into the back of your computer (or the keyboard) and restart your computer.
	Program in use has stopped responding to commands.	Shut down the computer using the keyboard and then restart the computer.
	Mouse needs repairs.	See your Worldwide Limited Warranty booklet for details.
	Computer is in Stand By mode.	Press the power button to resume from Stand By mode.
 CAUTION: When attempting to resume from Stand By mode, do not hold down the power button for more than four seconds. Otherwise, Stand By mode is lost, and you will lose your data.		
Mouse will only move vertically, horizontally, or movement is jerky.	Mouse roller ball is dirty.	Remove roller ball cover from the bottom of the mouse and clean it with a mouse cleaning kit available from most computer stores.

Solving Hardware Installation Problems

You may need to reconfigure the computer when you add or remove hardware, such as an additional diskette drive. If you install a plug and play device, Windows 2000 and Windows XP automatically recognize the device and configure the computer. If you install a non-plug and play device, you must reconfigure the computer after completing installation of the new hardware. In Windows 2000, select the **Add New Hardware** icon in the **Control Panel** (for Windows XP, use the **Add Hardware Wizard**) and follow the instructions that appear on the screen.

Solving Hardware Installation Problems

Problem	Cause	Solution
A new device is not recognized as part of the system.	Device is not seated or connected properly.	Ensure that the device is properly and securely connected and that pins in the connector are not bent down.
	Cable(s) of new external device are loose or power cables are unplugged.	Ensure that all cables are properly and securely connected and that pins in the cable or connector are not bent down.
	Power switch of new external device is not turned on.	Turn off the computer, turn on the external device, then turn on the computer to integrate the device with the computer system.
	When the system advised you of changes to the configuration, you did not accept them.	Reboot the computer and follow the instructions for accepting the changes.


Solving Hardware Installation Problems (*Continued*)

Problem	Cause	Solution
A new device is not recognized as part of the system (<i>continued</i>).	A plug and play board may not automatically configure when added if the default configuration conflicts with other devices.	Use Windows 2000 or Windows XP Device Manager to deselect the automatic settings for the board and choose a basic configuration that does not cause a resource conflict. You can also use Computer Setup to reconfigure or disable devices to resolve the resource conflict.
Computer will not start.	Wrong memory modules were used in the upgrade or memory modules were installed in the wrong location.	<ol style="list-style-type: none"> 1. Review the documentation that came with your system to determine if you are using the correct memory modules and to verify the proper installation. 2. Observe the beeps and LED lights on the keyboard. See Appendix A, "POST Error Messages" to determine possible causes. 3. If you still cannot resolve the issue, contact Compaq Technical Support.

Solving Network Problems

Some common causes and solutions for network problems are listed in the following table. These guidelines do not discuss the process of debugging the network cabling.

Solving Network Problems

Problem	Cause	Solution
Remote Wakeup feature is not functioning.	The Remote Wakeup feature is not available when using an AUI network connection.	Use an RJ-45 network connection.
	Remote Wakeup is not enabled.	Use the Network control application to enable Remote Wakeup. See the <i>Desktop Management Guide</i> .
Network driver does not detect network controller.	Network controller is disabled.	Run Computer Setup and enable network controller.
	Incorrect Network Driver.	Check the network controller documentation for the correct driver or obtain the latest driver from the manufacturer's Web site.
Network status link light does not turn on or it never flashes.  The network status light is supposed to flash when there is network activity.	No active network is detected.	Check cabling and network equipment for proper connection.
	Network controller is not set up properly.	Use the Network control application to verify that device is working properly. See the <i>Network Communications Guide</i> .
	System is configured for AUI connection.	No solution; link LED does not apply to AUI connections.
	Network driver is not properly loaded.	Reinstall network drivers. See the <i>Network Communications Guide</i> .

Solving Network Problems (*Continued*)

Problem	Cause	Solution
Network status link light does not turn on or it never flashes (<i>continued</i>).	System cannot autosense the network.	Disable auto-sensing capabilities and force the system into the correct operating mode. See the <i>Network Communications Guide</i> .
Diagnostics reports a failure.	The cable is not securely connected.	Ensure that the cable is securely attached to the network connector and that the other end of the cable is securely attached to the correct device.
	The cable is attached to the incorrect connector.	Ensure that the cable is attached to the correct connector.
	There is a problem with the cable or a device at the other end of the cable.	Ensure that the cable and device at the other end are operating correctly.
	Network controller interrupt is shared with an expansion board.	Under the Computer Setup Advanced menu, change the resource settings for the board.
	The network controller is defective.	Contact your Compaq authorized service provider.
Diagnostics passes, but the computer does not communicate with the network.	Network drivers are not loaded, or driver parameters do not match current configuration.	Make sure the network drivers are loaded and that the driver parameters match the configuration of the network controller. Make sure the correct network client and protocol is installed.
	The network controller is not configured for this computer.	Select the Network icon in the Control Panel and configure the network controller.
Network controller stopped working when an expansion board was added to the computer.	Network controller interrupt is shared with an expansion board.	Under the Computer Setup Advanced menu, change the resource settings for the board.

Solving Network Problems (*Continued*)

Problem	Cause	Solution
Network controller stopped working when an expansion board was added to the computer (<i>continued</i>).	The network controller requires drivers.	Verify that the drivers were not accidentally deleted when the drivers for a new expansion board were installed.
	The files containing the network drivers are corrupted.	Reinstall the network drivers, using the <i>Compaq Restore</i> CD.
	The expansion board installed is a network card (NIC) and conflicts with the embedded NIC.	Use the Computer Setup to disable the embedded NIC.
Network controller stops working without apparent cause.	The files containing the network drivers are corrupted.	Reinstall the network drivers, using the <i>Compaq Restore</i> CD.
	The cable is not securely connected.	Ensure that the cable is securely attached to the network connector and that the other end of the cable is securely attached to the correct device.
	The network controller is defective.	Contact your Compaq authorized service provider.
New network card will not boot.	New network card may not be Compaq compatible.	Install Compaq-compatible NIC or change boot sequence to boot from another device.
Cannot connect to network server when attempting Remote System Installation.	The network controller is not configured properly.	Run Computer Setup and modify the NIC Settings.
System setup utility reports unprogrammed EEPROM.	Unprogrammed EEPROM.	Contact your Compaq authorized service provider.

Solving Processor Problems

If you encounter processor problems, a common cause and solution are listed in the following table.

Solving Processor Problems

Problem	Cause	Solution
Poor performance is experienced.	Processor is hot.	<ol style="list-style-type: none"> 1. Make sure the airflow to the computer is not blocked. 2. Make sure the fans are connected and working properly (some fans only operate when needed). 3. Make sure the processor heatsink is installed properly.

Solving Memory Problems

If you encounter memory problems, some common causes and solutions are listed in the following table.



CAUTION: For those systems that support ECC memory, Compaq does not support mixing ECC and non-ECC memory. Otherwise, the **Num Lock** LED on non-USB keyboards will blink continuously, and the system will not boot the operating system. In addition, if a speaker is installed in the system, there will be a short beep followed by 2 long beeps.



See the “Interpreting the Diagnostic Lights” section of the *Getting Started* guide to identify other possible memory problems.

Solving Memory Problems

Problem	Cause	Solution
System will not boot or does not function properly after installing additional memory modules.	Memory module is not the correct type or speed grade for the system or the new memory module is not seated properly.	Replace module with the correct industry-standard device for your computer.
		ECC and non-ECC memory modules cannot be mixed.
Out of memory error.	Memory configuration may not be set up correctly.	Use the Device Manager to check memory configuration.
	You have run out of memory to run the application.	Check the application documentation to determine the memory requirements.
Memory count during POST is wrong.	The memory modules may not be installed correctly.	Check that the memory modules have been installed correctly and that proper modules are used.
Insufficient memory error during operation.	Too many Terminate and Stay Resident programs (TSRs) are installed.	Delete any TSRs that you do not need.
	You have run out of memory for your application.	Check the memory requirements for the application or add more memory to the computer.
Unit is on but there is no video and, on most models, the Power LED is flashing Red or Yellow.	Memory is not installed correctly and system is not booting.	Reinstall memory modules.

Solving CD-ROM and DVD Problems

If you encounter CD-ROM or DVD problems, see the common causes and solutions listed in the following table or to the documentation that came with the optional device.

Solving CD-ROM and DVD Problems

Problem	Cause	Solution
System will not boot from CD-ROM or DVD drive.	The CD-ROM or DVD boot is not enabled through the Computer Setup utility.	Run the Computer Setup utility and enable booting to removable media and verify boot order settings.
	Non-bootable CD in drive.	Try a bootable CD in the drive.
CD-ROM or DVD devices are not detected or driver is not loaded.	Drive is not connected properly or not properly configured.	See the documentation that came with the optional device.
Movie will not play in the DVD drive.	Movie may be regionalized for a different country.	See the documentation that came with the DVD drive.
	Decoder software is not installed.	Install decoder software.
Cannot eject compact disc (tray-load unit).	Disc not properly seated in the drive.	Turn off computer and insert a thin metal rod into the emergency eject hole and push firmly. Slowly pull the tray out from the drive until the tray is fully extended, then remove the disc.
CD-ROM, CD-RW, DVD-ROM, or DVD-R/RW drive cannot read a disc or takes too long to start.	CD has been inserted upside down.	Re-insert the CD with the label facing up.

Solving CD-ROM and DVD Problems

Problem	Cause	Solution
CD-ROM, CD-RW, DVD-ROM, or DVD-R/RW drive cannot read a disc or takes too long to start (continued).	The DVD-ROM drive takes longer to start because it has to determine the type of media played, such as audio or video.	Wait at least 30 seconds to let the DVD-ROM drive determine the type of media being played. If the disc still does not start, read the other solutions listed for this topic.
	CD or DVD disc is dirty.	Clean CD or DVD with a CD cleaning kit, available from most computer stores.
	Windows does not detect the CD-ROM or DVD-ROM drive.	<ol style="list-style-type: none"> 1. Use Device Manager to remove or uninstall the device in question. 2. Restart your computer and let Windows detect the CD or DVD driver.
Recording audio CDs is difficult or impossible.	Wrong or poor quality media type.	<ol style="list-style-type: none"> 1. Try using a slower speed when recording. 2. Verify that you are using the correct media for the drive. 3. Try a different brand of media. Quality varies widely between manufacturers.

Solving Software Problems

Most software problems occur as a result of the following:

- The application was not installed or configured correctly.
- There is insufficient memory available to run the application.
- There is a conflict between applications.
- Be sure that all the needed device drivers have been installed.
- If you have installed an operating system other than the factory-installed operating system, check to be sure it is supported on your system.

Where available, run the Compaq Configuration Record Utility to determine if any changes have been made to the software which may be causing a problem. See the *Desktop Management Guide* on the *Documentation Library* CD for more information.

Solving Software Problems

Problem	Cause	Solution
Computer will not start.	System files may be damaged.	Observe the beeps and LED lights on the keyboard. See Appendix A, "POST Error Messages" to determine possible causes. See your Compaq Restore kit or your Worldwide Limited Warranty for details.
"Illegal Operation has Occurred" error message is displayed.	Software being used is not Microsoft-certified for your version of Windows.	Verify that the software is certified by Microsoft for your version of Windows (see program packaging for this information).
	Configuration files are corrupt.	If possible, save all data, close all programs, and restart your computer.

Contacting Compaq Customer Support

For help and service, contact your Compaq authorized reseller or dealer. To locate a Compaq reseller or dealer near you, visit the Compaq Web site at www.compaq.com.



If you take your computer to a Compaq authorized reseller, dealer, or service provider for service, remember to provide the setup and power-on passwords, if they are set.

Post Error Messages

This appendix lists the error codes, error messages, and the various indicator light and audible sequences that you may encounter during Power-On Self-Test (POST) or computer restart, the probable source of the problem, and steps you can take to resolve the error condition.

POST Numeric Codes and Text Messages

This section covers those POST errors that have numeric codes associated with them. The section also includes some text messages that may be encountered during POST.

Numeric Codes and Text Messages

Code/Message	Beeps	Probable Cause	Recommended Action
101-Option ROM Error	1L, 1S*	System ROM checksum.	<ol style="list-style-type: none">1. Verify the correct ROM.2. Flash the ROM if needed.3. If an expansion board was recently added, remove it and see if the problem remains.4. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.")5. If the message disappears, there may be a problem with the expansion card.6. Replace the system board.

*L = Long, S = Short

Numeric Codes and Text Messages (*Continued*)

Code/Message	Beeps	Probable Cause	Recommended Action
102-System Board Failure	None	DMA, timers, and so forth.	<ol style="list-style-type: none"> 1. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 2. Remove expansion boards. 3. Replace the system board.
103-System Board Failure	None	DMA, timers, and so forth.	<ol style="list-style-type: none"> 1. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 2. Remove expansion boards. 3. Replace the system board.
150-SafePost Active	None	A PCI expansion card is not responding.	<ol style="list-style-type: none"> 1. Restart the computer. 2. Disable SafePost. 3. If the expansion card does not respond, replace the card.
162-System Options Not Set	2S*	Configuration incorrect. RTC (real-time clock) battery may need to be replaced. Battery life is approximately 3–5 years.	<p>Run Computer Setup. Reset the date and time under Control Panel. If the problem persists, replace the RTC battery. See the <i>Hardware Reference Guide</i> for instructions on installing a new battery, or contact your Compaq authorized dealer or reseller for RTC battery replacement.</p>

*L = Long, S = Short

Numeric Codes and Text Messages (Continued)

Code/Message	Beeps	Probable Cause	Recommended Action
163-Time & Date Not Set	2S*	Invalid time or date in configuration memory. RTC (real-time clock) battery may need to be replaced. Battery life is approximately 3–5 years.	Reset the date and time under Control Panel (Computer Setup) can also be used to update the RTC date and time). If the problem persists, replace the RTC battery. See the <i>Hardware Reference Guide</i> for instructions on installing a new battery, or contact your Compaq authorized dealer or reseller for RTC battery replacement.
		CMOS jumper may not be properly installed.	Check for proper placement of the CMOS jumper.
164-Memory Size Error	2S*	Memory configuration incorrect.	<ol style="list-style-type: none"> 1. Run Computer Setup or Microsoft Windows utilities. 2. Make sure your memory module(s) are installed properly. 3. If third party memory has been added, test using Compaq-only memory. 4. Verify proper memory module type.
183-Invalid Processor Jumper Setting	2S*	System board jumper improperly set.	Reset system board jumpers to match processor and bus speeds (select models).

*L = Long, S = Short

Numeric Codes and Text Messages (*Continued*)

Code/Message	Beeps	Probable Cause	Recommended Action
201-Memory Error	None	RAM failure.	<ol style="list-style-type: none"> 1. Run Computer Setup or Windows utilities. 2. Ensure memory and continuity modules are installed correctly. 3. Verify proper memory module type. 4. Remove and replace the memory module(s) one at a time to isolate faulty module. 5. Replace faulty memory module(s). 6. If error persists after replacing memory modules, replace the system board.
202-Memory Type Mismatch	None	Memory modules do not match each other.	Replace memory modules with matched sets.
207-ECC Corrected Single Bit Errors in Memory Module Socket(s) y,y, ...	2S*	Single Bit ECC error.	<ol style="list-style-type: none"> 1. Verify proper memory module type. 2. Try another memory socket. 3. Replace memory module if problem persists.
212-Failed Processor	None	Processor has failed to initialize.	<ol style="list-style-type: none"> 1. Reseat the processor in its socket. 2. If the processor does not respond, replace it.

*L = Long, S = Short

Numeric Codes and Text Messages (Continued)

Code/Message	Beeps	Probable Cause	Recommended Action
213-Incompatible Memory Module in Memory Socket(s) X, X,...	2S*	A memory module in memory socket identified in the error message is missing critical SPD information, or is incompatible with the chipset.	<ol style="list-style-type: none"> 1. Verify proper memory module type. 2. Try another memory socket. 3. Replace memory module with a module conforming to the SPD standard.
214-Memory Device Failure. Error code: XX, Memory Module Socket(s): XX	None	A specific error has occurred in a memory device installed in the identified socket.	<ol style="list-style-type: none"> 1. Verify proper memory module type. 2. Try another memory socket. 3. Replace memory module if problem persists.
301-Keyboard Error	None	Keyboard failure.	<ol style="list-style-type: none"> 1. Reconnect keyboard with computer turned off. 2. Check connector for bent or missing pins. 3. Ensure that none of the keys are depressed. 4. Replace keyboard.
303-Keyboard Controller Error	None	I/O board keyboard controller.	<ol style="list-style-type: none"> 1. Reconnect keyboard with computer turned off. 2. Replace the system board.
304-Keyboard or System Unit Error	None	Keyboard failure.	<ol style="list-style-type: none"> 1. Reconnect the keyboard with computer turned off. 2. Ensure that none of the keys are depressed. 3. Replace the keyboard. 4. Replace the system board.

*L = Long, S = Short

Numeric Codes and Text Messages (Continued)

Code/Message	Beeps	Probable Cause	Recommended Action
401-Parallel Port 1 Address Assignment Conflict	2S*	IRQ address conflicts with another device.	Reset the IRQ.
402-Monochrome Adapter Failure	1L, 2S*	Monochrome display controller.	Replace the Monochrome display controller.
403-Parallel Port 3 Address Conflict Detected	2S*	IRQ address conflicts with another device.	Reset the IRQ.
404-Parallel Port Address Conflict Detected	2S*	Both external and internal ports are assigned to parallel port X.	<ol style="list-style-type: none">1. Remove any parallel port expansion cards.2. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.")3. Reconfigure card resources and/or run Computer Setup.
410-Audio Interrupt Conflict	2S*	IRQ address conflicts with another device.	Reset the IRQ.
411-Network Interface Card Interrupt Conflict	2S*	IRQ address conflicts with another device.	Reset the IRQ.

*L = Long, S = Short

Numeric Codes and Text Messages (Continued)

Code/Message	Beeps	Probable Cause	Recommended Action
501-Display Adapter Failure	1L, 2S*	Graphics display controller.	<ol style="list-style-type: none"> 1. Reseat the graphics card (if applicable). 2. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 3. Verify monitor is attached and turned on. 4. Replace the graphics controller.
510-Splash Screen image corrupted	None	Splash Screen image has errors.	Install latest version of ROMPaq to restore image.
511-CPU, Rear, or Front Fan not detected	None	Fan is not connected or may have malfunctioned.	<ol style="list-style-type: none"> 1. Reseat fan cable. 2. Replace the fan.
601-Diskette Controller Error	None	Diskette controller circuitry or floppy drive circuitry incorrect.	<ol style="list-style-type: none"> 1. Run Computer Setup. 2. Check and/or replace cables. 3. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 4. Replace diskette drive. 5. Replace the system board.
602-Diskette Boot Record Error	None	Diskette in Drive A not bootable.	Replace the diskette.

*L = Long, S = Short

Numeric Codes and Text Messages (*Continued*)

Code/Message	Beeps	Probable Cause	Recommended Action
605-Diskette Drive Type Error	2S*	Mismatch in drive type.	<ol style="list-style-type: none"> 1. Run Computer Setup. 2. Disconnect any other diskette controller devices (tape drives). 3. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.")
610-External Storage Device Failure	None	External tape drive not connected.	Reinstall tape drive or press F1 and allow system to reconfigure without the drive.
611-Primary Floppy Port Address Assignment Conflict	2S*	Configuration error.	Run Computer Setup.
612-Secondary Floppy Port Address Assignment Conflict	2S*	Configuration error.	<ol style="list-style-type: none"> 1. Run Computer Setup. 2. Remove expansion cards. 3. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.")
660-Display cache is detected unreliable	None	Integrated graphics controller display cache is not working properly and will be disabled.	Replace system board if minimal graphics degrading is an issue.
912-Computer Cover Has Been Removed Since Last System Startup	None		No action required.

*L = Long, S = Short

Numeric Codes and Text Messages (Continued)

Code/Message	Beeps	Probable Cause	Recommended Action
914-Hood Lock Coil is not Connected	None	Smart Cover Lock mechanism is missing or not connected.	1. Reconnect or replace hood locking mechanism. 2. Reseat or replace hood locking mechanism cable.
916-Thermal Sensor from Processor Heatsink is not Connected	None	Processor heatsink cable not connected to system board.	Reseat or replace the processor heatsink cable going to the system board.
917-Expansion Riser not Detected	None	Riser board not seated or not installed.	Install riser board if missing or remove and reseat to ensure good connection.
1151-Serial Port 1 Address Conflict Detected	2S*	Both external and internal serial ports are assigned to COM1.	1. Remove any serial port expansion cards. 2. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 3. Reconfigure card resources and/or run Computer Setup or Windows utilities.
1152-Serial Port 2 Address Conflict Detected	2S*	Both external and internal serial ports are assigned to COM2.	1. Remove any serial port expansion cards. 2. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 3. Reconfigure card resources and/or run Computer Setup or Windows utilities.

*L = Long, S = Short

Numeric Codes and Text Messages (*Continued*)

Code/Message	Beeps	Probable Cause	Recommended Action
1155-Serial Port Address Conflict Detected	2S*	Both external and internal serial ports are assigned to same IRQ.	<ol style="list-style-type: none"> 1. Remove any serial port expansion cards. 2. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 3. Reconfigure card resources and/or run Computer Setup or Windows utilities.
1201-System Audio Address Conflict Detected	2S*	Device IRQ address conflicts with another device.	Reset the IRQ.
1202-MIDI Port Address Conflict Detected	2S*	Device IRQ address conflicts with another device.	Reset the IRQ.
1203-Game Port Address Conflict Detected	2S*	Device IRQ address conflicts with another device.	Reset the IRQ.
1611-Fan failure detected	None	Chassis fan not connected to the system board.	<ol style="list-style-type: none"> 1. Reconnect the fan. 2. Replace the fan. 3. Replace the system board.

*L = Long, S = Short

Numeric Codes and Text Messages (*Continued*)

Code/Message	Beeps	Probable Cause	Recommended Action
1720-SMART Hard Drive Detects Imminent Failure	None	Hard drive is about to fail. (Some hard drives have a firmware patch that will fix an erroneous error message.)	<ol style="list-style-type: none">1. Determine if hard drive is giving correct error message. Run the Drive Protection System test if available.2. Apply firmware patch if applicable. (See www.compaq.com/support/techpubs/customer_advisories.)3. Back up contents and replace hard drive.
1782-Disk Controller Failure	None	Hard drive circuitry error.	<ol style="list-style-type: none">1. Run Computer Setup.2. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.")3. Check cable seating/jumper settings.4. Run hard drive diagnostics.5. Disconnect additional drives.6. Run the Drive Protection System test if available.7. Replace the hard drive.8. Replace the system board.

*L = Long, S = Short

Numeric Codes and Text Messages (*Continued*)

Code/Message	Beeps	Probable Cause	Recommended Action
1800-Temperature Alert	None	Internal temperature exceeds specification.	<ol style="list-style-type: none"> 1. Check that computer air vents are not blocked and cooling fan is running. 2. Verify processor speed selection. 3. Replace the processor. 4. Replace the system board.
1801	None	Processor is not supported by ROM BIOS.	Upgrade BIOS to proper version.
1998-Master Boot Record has been lost.	1L, 2S*	The previously saved copy of the MBR has been corrupted.	Run Computer Setup and save the MBR of the current bootable disk.
1999-Master Boot Record has changed.	1L*	The current MBR does not match the previously saved copy of the MBR.	Use extreme caution. The MBR may have been updated due to normal disk maintenance activities (disk manager, fdisk, or format). Replacing the previously saved MBR in such situations can cause data loss. If you are certain the MBR change is unintentional and undesired (e.g. due to a virus), then run Computer Setup and restore the previously saved MBR copy. Otherwise, run Computer Setup and either disabled MBR security or save the MBR of the current bootable disk.

*L = Long, S = Short

Numeric Codes and Text Messages (Continued)

Code/Message	Beeps	Probable Cause	Recommended Action
2000-Master Boot Record Hard Drive has changed.	1L, 2S*	The current bootable hard drive is not the same as the one that was present when MBR Security was enabled.	Run Computer Setup and either disable MBR security or save the MBR of the current bootable disk.
Invalid Electronic Serial Number.	None	Electronic serial number has become corrupted.	<ol style="list-style-type: none"> 1. Run Computer Setup. If Setup already has data in the field or will not allow the serial number to be entered, download from www.compaq.com and run SP5572.EXE (SNZERO.EXE). 2. Run Computer Setup and try to enter serial number under Security, System ID, then save changes.
ECC Multiple Bit Error Detected in Memory Module.	None	Chipset has detected more than one bad bit in a 64-bit quadword of the memory array.	Replace the memory module.
Parity Check 2.	None	Parity RAM failure.	Run Computer Setup and Diagnostic Utilities.

*L = Long, S = Short

POST Diagnostic Keyboard LEDs, Front Panel LEDs and Audible Codes

This section covers the keyboard and front panel LED codes as well as the audible codes that may occur during POST that do not necessarily have an error code or text message associated with them.



If your system is equipped with a Universal Serial Bus (USB) keyboard, you may hear the beep sequences for some of the keyboard light error codes, but you may not see the flashing keyboard lights.

Diagnostic Keyboard LEDs, Front Panel LEDs and Audible Codes

Activity	Beeps	Probable Cause	Recommended Action
Flashing Caps Lock LED on Keyboard.	None	Graphics controller not present or incorrectly initialized.	<ol style="list-style-type: none"> 1. Clear CMOS. (See Appendix B, "Password Security and Resetting CMOS.") 2. If graphics card has been added, remove and reseal. 3. Reseat riser board if applicable.
Flashing Num Lock LED on Keyboard (on select models.)	None	System memory not present.	<ol style="list-style-type: none"> 1. Check memory module (see the relevant section of the <i>Hardware Reference Guide</i>). 2. Remove and reseal memory module. 3. See the "Solving Memory Problems" section of this guide.



CAUTION: For those systems that support ECC memory, Compaq does not support mixing ECC and non-ECC memory. Otherwise, the **Num Lock** LED on non-USB keyboards will blink continuously, and the system will not boot the operating system. In addition, if a speaker is installed in the system, there will be a short beep followed by 2 long beeps.

Diagnostic Keyboard LEDs, Front Panel LEDs and Audible Codes (Continued)

Activity	Beeps	Probable Cause	Recommended Action
Num Lock LED On (keyboard).	None	Failed Boot Block.	Reflash the ROM using a ROMPaq diskette. See the "Failsafe Boot Block ROM" section of the <i>Desktop Management Guide</i> .
Flashing Scroll Lock LED on keyboard (on select models.)	None	System board hardware failure (prior to graphics).	Replace system board.
Green Power LED flashes every 2 seconds.	None	Computer in normal Suspend mode.	None
Green Power LED On.	None	Computer on.	None
Red or Yellow Power LED flashes every 2 seconds (on select models.)	None	Power supply overloaded.	<ol style="list-style-type: none"> 1. Push in power button. LED should be green. 2. Remove all AC power from computer, wait 30 seconds, then apply power. 3. Remove load from power supply by removing options one at a time until computer runs. 4. Check for damage to system board. 5. Replace system board. 6. Replace power supply.

Diagnostic Keyboard LEDS, Front Panel LEDs and Audible Codes (*Continued*)

Activity	Beeps	Probable Cause	Recommended Action
Flashing Power and Hard Drive Green LEDs.	None	Unseated riser board.	<ol style="list-style-type: none">1. Remove riser board.2. Wipe connector.3. Reinstall riser board (see the <i>Hardware Reference Guide</i> for directions on removing the riser board).
Red Power LED flashes every second (on select models.)	None	System memory error.	<ol style="list-style-type: none">1. Check memory module (see the relevant section of the <i>Hardware Reference Guide</i>).2. Remove and reseal memory module.3. See the “Solving Memory Problems” section of this guide.
Red or Yellow Power LED On	None	Processor unseated.	Reseat processor in system board.
Red or Yellow Power LED is: <ol style="list-style-type: none">1. Flashing four times per second, Or2. Flashing two times one second apart, followed by a two second pause, Or3. Not flashing.	None	Computer overheated.	<ol style="list-style-type: none">1. Install computer cover or access panel if necessary.2. Ensure that computer air vents are not blocked and internal fan is running.

Password Security and Resetting CMOS

This computer supports security password features, which can be established through the **Computer Setup Utilities** menu.

This computer supports two security password features that are established through the **Computer Setup Utilities** menu: setup password and power-on password. When you establish only a setup password, any user can access all the information on the computer except Computer Setup. When you establish only a power-on password, the power-on password is required to access Computer Setup and any other information on the computer. When you establish both passwords, only the setup password will give you access to Computer Setup.

When both passwords are set, the setup password can also be used in place of the power-on password as an override to log into the computer. This is a useful feature for a network administrator.

If you forget the password for your computer, you can gain access to the information on the computer by resetting the password jumper.



CAUTION: Resetting the password jumper will reset CMOS values to factory defaults and will erase any customized information including passwords, asset numbers, and special settings. It is important to back up the computer CMOS settings before resetting them in case they are needed later. Back up is easily done through **Computer Setup**. See the *Computer Setup (F10) Utility Guide* for information on backing up your CMOS settings.

Resetting the Password Jumper

To disable the power-on or setup password features, or to clear the power-on or setup passwords, complete the following steps:

1. Turn off the computer and any external devices, then disconnect the power cord from the power outlet.



WARNING: To reduce the risk of personal injury from electrical shock and/or hot surfaces, be sure to disconnect the power cord from the wall outlet, and allow the internal system components to cool before touching.



CAUTION: When the computer is plugged in, the power supply always has voltage applied to the system board even when the unit is turned off. Failure to disconnect the power cord can result in damage to the system.



CAUTION: Static electricity can damage the electronic components of the computer or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object. See the *Hardware Reference Guide* for more information.

2. Remove the access panel.
3. Locate the header labeled JCMOS1.



For assistance locating the password jumper and other system board components, see the Illustrated Parts Map (IPM) for your particular system.

4. Move the jumper from pins 1 & 2 to pins 2 & 3.
 5. Replace the access panel.
 6. Connect the power cord to the power outlet. Turn on the system and allow it to start.
-



Placing the jumper on pins 2 & 3 clears the current passwords and disables the password features.

7. To re-enable the password features, repeat steps 1-4, then replace the jumper on pins 1 and 2.
8. Repeat steps 5-6, then establish new passwords. See the *Computer Setup (F10) Utility Guide for Computer Setup* instructions.



All passwords will be cleared.

Clearing and Resetting the CMOS

The computer's configuration memory (CMOS) stores password information and information about the computer's configuration. To reset CMOS to the factory default settings first set time and date, you must first access the **Computer Setup Utilities** menu.

1. When the Computer Setup message appears in the lower-right corner of the screen, press the **F10** key.



If you do not press the **F10** key while the message is displayed, you must reboot the computer to access the utility.

2. Press the **Enter** key to select English. A choice of four headings appears in the **Computer Setup Utilities** menu: **File**, **Storage**, **Security**, and **Advanced**.
3. Use the arrow keys or the **Tab** key to select **File > Set Defaults** and **Exit**. This resets the soft settings that include boot sequence order and other factory settings. It will not, however, force hardware rediscovery.
4. Press the **Enter** key.
5. Press the **F10** key to confirm the reset or the **Esc** key to cancel the reset.

See the *Desktop Management Guide* for further instructions on reestablishing passwords. For instructions on Computer Setup, see the *Computer Setup (F10) Utility Guide*.

Drive Protection System (DPS)

The Compaq Drive Protection System (DPS) is a diagnostic tool built into the hard drives installed in select Desktops. DPS is designed to help diagnose problems that might result in unwarranted hard drive replacement.

When these systems are built, each installed hard drive is tested using DPS, and a permanent record of key information is written onto the drive. Each time DPS is run, test results are written to the hard drive. Your service provider can use this information to help diagnose conditions that caused you to run the DPS software.

Running DPS will not affect any programs or data stored on the hard drive. The test resides in the hard drive firmware and can be executed even if the computer will not boot to an operating system. The time required to execute the test depends on the manufacturer and size of the hard drive; in most cases, the test will take approximately two minutes per gigabyte.

Use DPS when you suspect a hard drive problem. If the computer reports a SMART Hard Drive Detect Imminent Failure message, there is no need to run DPS; instead, back up the information on the hard drive and contact your Compaq service provider for a replacement hard drive.

Accessing DPS Through Compaq Diagnostics for Windows

To access DPS through Compaq Diagnostics for Windows, perform the following steps:

1. Turn on the computer and select **My Computer > Control Panel > Compaq Diagnostics**.

A choice of five possible headings appears in the **Diagnostics** screen: **Overview, Test, Status, Log, and Error**.

2. Select **Test > Type of Test**.

A choice of three tests appear: **Quick Test, Complete Test, and Custom Test**.

3. Select **Custom Test**.

A choice of two test modes is offered: **Interactive Mode** and **Unattended Mode**.

4. Select **Interactive Test > Storage > Hard Drives**.

5. Select the specific drives to be tested > **Drive Protection System Test > Begin Testing**.

When the test has been completed, one of three messages will be displayed for each of the drives tested:

- Test Succeeded. Completion Code 0.
- Test Aborted. Completion Code 1 or 2.
- Test Failed. Drive Replacement Recommended. Completion Code 3 through 14.

If the test failed, the completion code should be recorded and reported to your service provider for help in diagnosing the computer problem.

Accessing DPS Through Computer Setup

When the computer does not power on properly, you should use Computer Setup to access the DPS program. To access DPS:

1. Turn on or restart the computer.
2. When the F10 Setup message appears in the lower-right corner of the screen, press the **F10** key.



If you do not press the **F10** key while the message is displayed, you must turn the computer off, then on again, to access the utility.

3. Press the **Enter** key to select English. A choice of four headings appears in the **Computer Setup Utilities** menu: **File**, **Storage**, **Security**, and **Advanced**.
4. Select **Storage > IDE DPS Self-Test** and press the **Enter** key.
The screen will display the list of DPS-capable hard drives that are installed on the computer.



If no DPS capable hard drives are installed, the **IDE DPS Self-Test** option will not appear on the screen.

5. Select the hard drive to be tested and press the **Enter** key.
6. Press the **F10** key to start the test or the **Esc** key to cancel the test. A dialog will appear, telling you how long the test will take to complete.
7. Repeat step 6.

When the test has been completed, one of three messages will be displayed:

- Test Succeeded. Completion Code 0.
- Test Aborted. Completion Code 1 or 2.
- Test Failed. Drive Replacement Recommended. Completion Code 3 through 14.

If the test failed, the completion code should be recorded and reported to your service provider for help in diagnosing the computer problem.

Setting up Analog/Digital Audio Output

Some computers may have an integrated audio solution that supports analog or digital external stereo speakers. These systems are capable of auto-sensing the speaker type and outputting the correct signal. To manually change between analog, digital and auto-sense, complete the following set of procedures based on your operating system.



If you set digital as your **Output Mode**, the internal speaker and external analog speakers will no longer output audio until you switch back to an auto-sense or analog mode. If you set analog as your **Output Mode**, external digital speakers will not function until you change the output mode back to an auto-sense or digital mode.

Microsoft Windows 2000

1. Click **Start > Settings > Control Panel** and double-click the **System** icon to open the **System Properties** panel.
2. Select **Device Manager** from the **System Properties** panel.
3. Click the “+” next to the **Sound, Video and Game Controllers** to expand it.
4. Double-click the appropriate audio device to open its **Properties** panel.
5. In the Configuration area of the **Settings** tab, change the **Output Mode** to the desired setting.
6. Click **OK** to close the **Properties** panel.
7. Close the **System Properties** panel.
8. Close the **Control Panel**.

Microsoft Windows XP

1. Click **Start > Control Panel** and then double-click the **Sounds, Speech, and Audio Devices** icon.
2. Select the **Hardware** tab.
3. Highlight the appropriate audio device.
4. Click **Properties** to open up the **Device Properties** panel.
5. Click the **Properties** tab.
6. Click the “+” next to “Audio Devices” to expand it.
7. Highlight the appropriate driver by clicking it.
8. Click **Properties**.
9. Click **Settings**.
10. Change the **Output Mode** to the desired setting.
11. Click **OK** to close the **Properties** panel.
12. Close the **Control Panel**.

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